

June 2, 2017

VIA ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, SW
Washington, DC 20554

Re: *Notice of Ex Parte Presentation*
Mobility Fund Phase II Challenge Process
WT Docket No. 10-208; WC Docket No. 10-90

Dear Ms. Dortch:

On May 31, 2017, ATN International, Inc., on behalf of itself and its subsidiaries Choice Communications, LLC; NTUA Wireless, LLC; and Commnet Wireless, LLC (“ATN”) and Buffalo-Lake Erie Wireless Systems, LLC dba Blue Wireless met with Claude Aiken from the Office of Commissioner Mignon Clyburn. In attendance were Douglas J. Minster, Vice President, Government and Regulatory Affairs, ATN; Rohan Ranaraja, Director, Regulatory Affairs, ATN; Brian Gelfand, President, Blue Wireless; and undersigned counsel.

In the meeting, we urged the Commission, in determining areas eligible for Mobility Fund Phase II (“MF-II”) support, to start with Form 477 data and perfect it with a challenge process based on actual coverage data derived from on-the-ground testing, consistent with the “Option B” proposal¹ and the parties’ filings in these dockets.² This will result in the most accurate dataset and the firmest foundation for MF-II implementation in the near future. By contrast, a new data collection specific to MF-II is unlikely to result in more consistent data that

¹ *Connect America Fund; Universal Service Reform – Mobility Fund*, Report and Order and Further Notice of Proposed Rulemaking, 32 FCC Rcd 2125, 2238-39 ¶¶ 241-46 (2017) (“Order” or “Further Notice” as appropriate). See also Letter from ATN, AT&T, and Blue Wireless to Marlene H. Dortch, FCC, WT Docket No. 10-208, WC Docket No. 10-90 (filed Feb. 9, 2017) (“Option B Proposal”). A summary of the parties’ current challenge process proposal is attached to this letter as an Appendix.

² See Comments of ATN and Blue Wireless, WT Docket No. 10-208 and WC Docket No. 10-90 (filed April 26, 2017) (“ATN/Blue Wireless Challenge Comments”); Reply Comments of ATN and Blue Wireless, WT Docket No. 10-208 and WC Docket No. 10-90 (filed May 11, 2017) (“ATN/Blue Wireless Challenge Reply”).

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accurately identifies areas eligible for MF-II support or minimizes challenges, and is likely to significantly delay the MF-II reverse auction. As a result, the Commission should adopt a challenge process consistent with the Appendix to this letter, which reflects elements of broad, industry-wide consensus.

MF-II Should Be Based on Actual Coverage Data, Not Hypothetical Modeling.

Proposals for a new data collection rely on hypothetical propagation models utilizing a wide range of assumptions, rather than actual coverage data.³ In addition to being inherently less reliable than actual data, unless the Commission specifies a prohibitively long list of parameters for running such models, different carriers' results will be inconsistent. Yet no agreement exists about which parameters are crucial or what values should be selected for them. For example, the Option C Proposal sets out five general modeling principles (including the modeling of "outdoor" coverage, spatial resolution of 100 meters, and software types to be used) and a list of assumptions (including path loss, cell edge probability, antenna configuration, and cell loading).⁴ Other parties, however, have suggested that additional criteria would be needed, such as a signal strength threshold – which CCA describes as "essential."⁵ Yet the record does not provide guidance on how signal strength would be measured (e.g., RSRP, RSRQ, or SINR). CCA also suggests specifying "a determined clutter factor," but does not specify what factor should be used.⁶

It also is unclear whether the parameters in the record are appropriate. For example, the Option C Proposal states that carriers' models should utilize spatial resolution "of 100m BINS or less." With spatial resolution of 100 meters, the model effectively looks at the world in pixels that are 330 feet on a side – larger than a football field. This is hardly an accurate representation of terrain, and could have a significant impact on predicted coverage contours.

Even if there were agreement on which parameters had to be specified in order to obtain consistent modeling of carriers' coverage (which there is not), the Commission would have to set very specific values in order to obtain consistent results. For example, as noted above, Option C specifies terrain resolution of "100m BINS or less." Carriers responding to the data collection could choose to provide a more accurate map by running their models using a more granular resolution, but then that carrier's map would be inconsistent with the map of another carrier that selected a different value in the permissible range. Some of the inconsistencies in different filers' models will be inadvertent, while others might be designed to intentionally affect the map.

³ See, e.g., Comments and Petition for Reconsideration of CTIA, WT Docket No. 10-90 and WC Docket No. 10-208 (filed April 26, 2017) ("Option C Proposal"). As noted above, ATN and Blue Wireless's proposal relies on actual coverage data rather than models.

⁴ Option C Proposal at 11-12.

⁵ Comments of CCA, WT Docket No. 10-208 and WC Docket No. 10-90 (filed April 26, 2017) at 14-15.

⁶ *Id.* at 11. Clutter is a factor used in a model to account for the impacts of factors such as foliage, buildings, or other objects that may impede signal propagation.

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The risk of filers' intentionally selecting values to reach a particular result is exacerbated by a data collection that is set out to be for the purpose of MF-II.

A simplified approach of calling for revised coverage maps based simply on a single factor, such as 5 Mbps download throughput, would not solve these problems. All of the factors discussed above drive a propagation model's prediction about coverage and throughput. Simply specifying a throughput model would leave all of the variables discussed above, and more, in the hands of filers, resulting in even less consistent data that would lead to apples to oranges comparisons and increase the likelihood of challenges.

MF-II Should Extend Service to Unserved Areas, Not Improve Service in Areas With Existing Coverage. Given the very limited budget for MF-II, we observed that the program must be focused on identifying areas that lack current coverage – not areas where carriers would like government assistance to upgrade their existing service. A new data collection – particularly under the parameters proposed in Option C – is likely to expand the map of eligible areas to include areas with existing service, diverting support from its intended purpose. In particular, Option C calls for the submission of coverage maps showing areas where the carrier is likely to be providing 5 Mbps at a 90% cell edge probability.⁷ A coverage map based on 90% probability of 5 Mbps service will represent an artificially small service contour.⁸ For this reason, too, Option C's new data collection would not provide maps of unserved areas appropriate for determining MF-II eligibility.

A New Data Collection Would Significantly Delay the Benefits of MF-II in Rural America. In addition to yielding inferior information about coverage, a new data collection is likely to delay the long-awaited MF-II auction significantly. First, the process for obtaining Office of Management and Budget ("OMB") approval for an industry-wide data collection would be far from trivial – and much more rigorous and time-consuming than simply obtaining approval for a form for carrier challenges. The last time the FCC did a special-purpose, industry-wide data collection, in the Business Data Services docket, OMB approval took *nine months* despite concerted FCC efforts.⁹ Second, the data collection itself would take time. Third, and perhaps most significantly, because (as discussed above) the data from a new data collection

⁷ Option C Proposal at 4.

⁸ See also Petition for Reconsideration of T-Mobile USA, Inc., WT Docket No. 10-208 (filed April 27, 2017) at 4-5 (showing national carriers' throughput rates by carrier by state, with the 10 Mbps representing the 77th percentile and 15 Mbps the 35th percentile).

⁹ See *Business Data Services in an Internet Protocol Environment*, Tariff Investigation Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 4723, 4740 ¶ 36 & n.78 (2016) ("The Bureau submitted the collection to [OMB] for review as required by the PRA, and after a lengthy review process, OMB approved the collection subject to modification on August 15, 2014.") (The footnote indicates that OMB sought comment on the request for approval by public notice published Dec. 9, 2013, suggesting that the FCC would have submitted it in November 2013 or sooner.)

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would be no more consistent, accurate, or reliable than the current Form 477 data, there is no reason to believe that the challenge process would be any shorter.

Delay of the MF-II auction is a serious problem. MF-II was to have been implemented in 2013.¹⁰ The phase-down of legacy support has been paused since June 30, 2014, and the legacy system is distributing over \$48 million per month in support that “does not efficiently serve the nation.”¹¹ The flow of legacy support has extended far longer than anyone expected or committed, and every month that goes by, more support goes out the door without the expansion of mobile service in rural America.

There is Broad Consensus in the Record for a Challenge Process Based on Option B.

Significantly, the challenge processes proposed in Option C (the portion of the process following any new data collection) is, in many key respects, identical to the challenge process proposed in Option B. ATN and Blue Wireless described in their Reply Comments how the Commission could take the best elements of Option B and Option C to create a strong challenge process to determine the areas where coverage is lacking. We have summarized this “best-in-class” challenge process in the Appendix to this letter. This process would lead to maps based on actual coverage data rather than hypothetical modeling.

A Test-Based Challenge Process Is Not Burdensome, Even for Small Carriers.

Contentions that a challenge process based on actual coverage testing would be burdensome, even for rural carriers, are specious. As we discussed, all legitimate wireless carriers should have drive-testing capabilities. Such equipment is not at all expensive to acquire and is a necessity for operating a mobile network. Testing equipment can be placed in any vehicle and run as the vehicle is driven at the speed limit throughout the area to be challenged. Blue Wireless used its own service territory as an example – a large area stretching across much of southern New York and northern Pennsylvania – and indicated that it could drive test its entire area if it needed to in a matter of a few weeks. Neither ATN nor Blue Wireless is a large carrier, and Blue Wireless is in fact a small provider serving a large rural service territory. Yet neither ATN nor Blue Wireless believes that there is any legitimate basis to be concerned about the burdens of a test-based challenge process. Other carriers have expressed the same view.¹²

* * *

In sum, we urged the Commission to adopt a challenge process that results in coverage maps based on actual data, and to reject calls for a burdensome and time-consuming data request based on hypothetical models of coverage that would be no more reliable or consistent than the

¹⁰ *Connect America Fund, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd 17663, 17773 ¶ 295 (2011) (subsequent history omitted).

¹¹ *Id.* at 17772 ¶ 296.

¹² Reply Comments of Wireless Partners, LLC, WT Docket No. 10-208 (filed May 11, 2017) at 3.

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current Form 477 data. A new data collection would unacceptably delay the MF-II auction. The Commission owes it to rural America to move ahead as expeditiously as possible. The proposal in this letter is the way to achieve that goal.

Sincerely,

/s/

L. Charles Keller

cc: Claude Aiken

- APPENDIX -
SUMMARY OF CHALLENGE PROCESS PROPOSAL
FOR A MOBILITY FUND COVERAGE MAP
BASED ON ACTUAL COVERAGE DATA

This summarizes the Option B challenge process, with certain potential improvements suggested in the Option C challenge process. For greater detail regarding any individual element, see the Option B Proposal or the Option C Proposal.

- Commission releases shapefile maps of provisionally eligible areas based on most-current Form 477 data showing 4G LTE coverage.
- Carriers would have 60 days to review the provisional maps, identify areas where they believe the data needs to be improved, and conduct actual testing of coverage to correct the provisional maps in such areas.
 - Testing can be performed with standard carrier drive-test equipment or commercial speedtest apps.
 - To perform a test using drive test equipment, the equipment should be set to record the network throughput rate, and the proponent of the data should provide the output of the post-processing file created by the drive-test equipment demonstrating that coverage is or is not available. Results for each provider should be provided for points along the route driven that are at most one quarter mile apart, but not more than one mile apart. The tests should be taken while the vehicle is moving at a speed that is at or under the speed limit for the roadway or at a speed appropriate for the road type if no limit is posted. The route for the drive test should result in a distribution of test locations as specified below, and should include some roadways below the S1400 category if they exist. Results for each reported location should be provided whether it is below or above the 5 Mbps average outdoor download speed threshold. If no signal is available at the location, providers should record that as the test result.
 - To perform a test using a speed test application, the challenger should record five download speed readings over a ten-minute period at each location and for each alleged coverage provider to manage variability. The challenger should then discard the highest and lowest readings at each location and for each alleged coverage provider, calculate an average of the remaining three readings, and submit the resulting figure to the FCC. An average available download speed of less than 5 Mbps indicates that a provider's coverage does not meet the LTE MF-II standard at that location. Results for each reported location should be provided whether it is below or above the 5 Mbps average outdoor download speed threshold. If no signal is available at the location, providers should record that as the test result.
 - Testing would be for the presence of 4G LTE service at 5 Mbps download.
 - Tests must be conducted at least 0.25 mile but no more than 1 mile apart and the distribution of test points should, to the extent practicable, cover the entire challenged area. The test date, time, and GPS coordinates should be recorded.

- Tests should be performed between the hours of 6:00 am and midnight local time.
- Challenge submissions must include a revised coverage shapefile for the challenged area reflecting actual coverage based on the testing described above, as well as the underlying test data.
- Challenges would be submitted to the carrier submitting the original coverage data with a copy to the Wireless Telecommunications Bureau (“Bureau”).
- Carriers receiving a challenge to their Form 477 coverage data would have 30 days to review the challenges and, if necessary, respond.
 - In most cases, no response will be necessary because challengers’ actual testing data is likely to be more accurate than the modeling data upon which the original Form 477 submission was based.
 - Where the challenged carrier believes, despite the challenger’s showing, that its original submissions were correct, it must provide actual testing data conforming to the standards above.
- The Bureau would review all challenges, and any responsive filings that may be received, and publish a final coverage map reflecting the actual data adduced during the challenge process.
 - In the unlikely event a challenger and a Form 477 filer both submit test result data that vary from one another, the Bureau could (1) review the data and determine which, based on the Bureau’s expert opinion, is more authoritative, or (2) apply a presumption that either the challenged carrier’s test data or the challenger’s test data are accurate. Given the extremely limited funding allocated for MF-II, it may best serve the public interest to assume that, if any carrier was able to submit test data showing coverage in a given area, the area should not be eligible for MF-II support.
- The Bureau would then proceed with the MF-II auction without further delay.